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EXAMINER	
LE, MIRANDA	
ART UNIT	PAPER NUMBER
2169	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/762,918	YEUNG ET AL.	
	Examiner	Art Unit	
	MIRANDA LE	2169	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 October 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22,29-39,46-50 and 52-62* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22,29-39,46-50 and 52-62* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/20/08 has been entered.

This communication is responsive to Amendment, filed 10/20/08.

Claims 1-22, 29-39, 46-50, 52-62 are pending in this application. This action is made non-Final.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-22; 29-31, 62; 53-57 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

In accordance with 35 USC § 101, a patentable process must (1) be tied to a particular apparatus or machine or (2) transform underlying subject matter (such as an article or materials) to a different state or thing. *See In re Bilski,* 2007-1130 (Fed. Cir. 2008) *slip op at* 10-11 ("The Supreme Court, however, has enunciated a definitive test to determine whether a process claim is tailored

narrowly enough to encompass only a particular application of a fundamental principle rather than to pre-empt the principle itself. A claimed process is surely patent-eligible under § 101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing").

Independent claims 1, 29, 53 are not tied to a particular apparatus or machine because "obtaining an entity model...; obtaining a work model...; assigning task..." (claim 1); ":obtaining data...; comparing said data..." (claim 29); "obtaining an emtity model...; obtaining a work model...; assigning task..." (claim 53); do not necessarily involve the use of a computer or machine. The method of claims 1, 29, 53 define a sequence of operational steps that encompasses within its scope merely a set of mental manipulations that provide an output remaining in the mental realm. Therefore, claims 1, 29, 53 are not tied to a particular apparatus or machine.

In addition, claims 1, 29, 53 do not transform the underlying subject matter (data) into a different state or thing. Thus, claims 1, 29, 53 are directed to a non-statutory process.

Claims 2-22; 30-31, 62; 54-57, are dependent upon claims 1, 29, 53, respectively, do not add any limitations which correct the deficiencies of claims 1, 29, 53, and are therefore also similarly rejected.

Claims 32-39 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 32, 36, as amended, recite "A computer product having a computer-readable medium...", however, the claims fail to place the invention squarely within one statutory class of invention. In paragraph [0069-0070] of the instant specification, applicant has provided evidence that applicant intends the "medium" to include signals such as "transmission media", "non-volatile memory", "carrier wave". As such, the claims are drawn to a form of energy. Energy is not one of the four categories of invention and therefore this claim(s) is/are not statutory. Energy is not a series of steps or acts and thus is not a process. Energy is not a physical article or object and as such is not a machine or manufacture. Energy is not a combination of substances and therefor not a composition of matter.

A computer-readable medium including a carrier wave, or signal, is non-statutory subject matter as set forth in MPEP 2106 (IV)(B)(2)(a). Therefore, claim 32 is not limited to tangible embodiments, instead being sufficiently broad so as to encompass intangible media such as transmission media; the claims are not limited to statutory subject matter and are therefore non-statutory.

Applicant is advised to amend the claims as "A computer product comprising a computer readable **storage** medium..."; also amend the specification to include the term "computer readable **storage** medium"; and delete the terms "transmission media", "non-volatile memory", "carrier wave" in order to overcome the 101 issues.

Claims 31-35, 37-39 incorporate the deficiencies of claims 32, 36, respectively, and do not add tangibility to the claimed subject matter, they are likewise rejected.

Claims 46-49 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Firstly, reciting "a computer-implemented system" in the preamble holds no patentable weight unless it is suggested in the body of the claim. Secondly, although Applicant amended the claim as "*wherein said business process creation module is implemented at least in part by a processor*", *the hardware element* (i.e. processor) that make up the system claim was not positively recited.

Specifically, claim 46 recites "A computer-implemented system..., comprising: a business process creation module...; : a business process execution and monitoring module"; as such, these elements (i.e. business process creation, execution and monitoring modules) that make up the system are all software applications. Since the body of the claim does not positively define any specific hardware to execute the recited software components, the claimed system is not limited to embodiments which include the hardware necessary to enable any underlying functionality to be realized, instead being software per se. See MPEP 2106.01.

Claims 47-49 incorporate the deficiencies of claim 46, and do not add tangibility to the claimed subject matter, they are likewise rejected.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 29-31, 62 are rejected under 35 U.S.C. 102(b) as being anticipated by Charisius et al. (US Patent No. 6,938,240).

As per claim 29, Charisius teaches a method for optimizing a business process involving a task *(i.e. to optimize workflow definition file 6800, col. 44, lines 26-42)*, said method comprising:

obtaining data *(i.e. skill 7710 of "MG" resource profile 7704, col. 44, lines 15-25)* regarding a result of a performance of said task *(i.ethe Client Interface 134 may compare a skill of the resource-most-often-assigned (e.g., "MG") to the skills in role profiles other than "Assembler" role profile 7604 in order to identify an optimal role that may be assigned to responsible role 6806 for activity 6801. For example, the Client Interface 134 may compare skill 7710 of "MG" resource profile 7704 to skills 7622 and 7624 of role profiles 7606 and 7608, respecively. In this example, the Client Interface 134 is able to identify that skill 7622 of role profile 7606 matches skill 7624 of role profile 7608 corresponding to "Gopher" role 7620, col. 44, lines 15-25)*; and

comparing *(i.e. compare skill 7710 of "MG" resource profile 7704 to skills 7622 and 7624 of role profiles 7606 and 7608, respectively, col. 44, lines 15-25)*

said data *(i.e. skill 7710 of "MG" resource profile 7704, col. 44, lines 15-25)* with data *(i.e. skills 7622 and 7624 of role profiles 7606 and 7608, col. 44, lines 15-25)* regarding a result of a previously performed task *(i.e. In another implementation, the Client Interface 134 may compare a skill of the resource-most-often-assigned (e.g., "MG") to the skills in role profiles other than "Assembler" role profile 7604 in order to identify an optimal role that may be assigned to responsible role 6806 for activity 6801. For example, the Client Interface 134 may compare skill 7710 of "MG" resource profile 7704 to skills 7622 and 7624 of role profiles 7606 and 7608, respecively. In this example, the Client Interface 134 is able to identify that skill 7622 of role profile 7606 matches skill 7624 of role profile 7608 corresponding to "Gopher" role 7620, col. 44, lines 15-25)*; and

automatically determining an optimized business process *(i.e. to identify an optimal role, col. 44, lines 15-25)* based at least on said comparing *(i.e. If it is determined that all plans that have been created from the workflow have been checked, the Client Interface 134 then determines if the maximum percentage for any condition-to-check is exceeded for any activity in the workflow (Step 6732 in FIG. 67B). To determine if the maximum percentage for any condition-to-check is exceeded, the Client Interface 134 calculates a percentage-met for each condition-to-check for each activity in the workflow. The Client Interface 134 calculates each percentage-met by dividing the number of times that each condition-to-check was found true (i.e., value of the condition-to-check counter) by the number of plans checked (i.e., value of plan counter) times one hundred*

(100). The Client Interface 134 then compares the maximum percentage for each condition-to-check with each calculated percentage-met to determine if any maximum percentage has been exceeded for any activity in the workflow, col. 40, lines 34-50).

As per claim 30, Charisius teaches the method of claim 29, wherein said data regarding the result of the performance of said task is selected form the group consisting of cost performing said task *(i.e. The tool 200 stores the role profiles in association with the selected workflow activity on WebDAV Storage 142. The tool 200 saves significant costs in developing multiple workflows by allowing the enterprise affiliate to store the role profiles in association with the selected workflow activity on WebDAV Storage 142 so that the role profiles may be available for the enterprise affiliate to assign to an activity of another workflow that is also related to the selected workflow activity, col. 20, lines 27-45),* time required to perform said task, and number of persons involved in performing said task *(i.e. Returning to FIG. 3, the next step performed by the tool is to create a plan from the workflow (step 306). Each activity in the default path of the workflow generally corresponds to a task in the plan. The task identifies the scheduled start and stop times for the task. The tool then displays the plan (step 308). For example, the plan created from the workflow 400 depicted in FIG. 4 is shown in FIG. 7. The plan 700 includes two tasks 702 and 704 that correspond to the two activities 406 and 408 from the workflow 400. The first task 702 is scheduled to begin at 9 a.m. 706 on Aug. 1, 2001 (not shown), and end at 6 p.m.*

708 on the same day. The second task 704 is scheduled to begin at 9 a.m. 710 on Aug. 2, 2001 (712) and end at 5 p.m. 714 on the same day, col. 15, lines 23-36).

As per claim 31, Charisius teaches the method of claim 29, wherein said automatically determining is performed using a software or a device *(i.e. If it is determined that all plans that have been created from the workflow have been checked, the Client Interface 134 then determines if the maximum percentage for any condition-to-check is exceeded for any activity in the workflow (Step 6732 in FIG. 67B). To determine if the maximum percentage for any condition-to-check is exceeded, the Client Interface 134 calculates a percentage-met for each condition-to-check for each activity in the workflow. The Client Interface 134 calculates each percentage-met by dividing the number of times that each condition-to-check was found true (i.e., value of the condition-to-check counter) by the number of plans checked (i.e., value of plan counter) times one hundred (100). The Client Interface 134 then compares the maximum percentage for each condition-to-check with each calculated percentage-met to determine if any maximum percentage has been exceeded for any activity in the workflow, col. 40, lines 34-50).*

As per claim 62, (New) Charisius teaches the method of claim 29, wherein said business process comprises one or more tasks desired to be performed by one or more entities *(i.e. Returning to FIG. 3, the next step*

performed by the tool is to create a plan from the workflow (step 306). Each activity in the default path of the workflow generally corresponds to a task in the plan. The task identifies the scheduled start and stop times for the task. The tool then displays the plan (step 308). For example, the plan created from the workflow 400 depicted in FIG. 4 is shown in FIG. 7. The plan 700 includes two tasks 702 and 704 that correspond to the two activities 406 and 408 from the workflow 400. The first task 702 is scheduled to begin at 9 a.m. 706 on Aug. 1, 2001 (not shown), and end at 6 p.m. 708 on the same day. The second task 704 is scheduled to begin at 9 a.m. 710 on Aug. 2, 2001 (712) and end at 5 p.m. 714 on the same day, col. 15, lines 23-36).

Claims 53, 55, 56, 58, 61 are rejected under 35 U.S.C. 102(b) as being anticipated by Leisten et al. (US Patent No. 6,023,702).

As per claim 53, Leisten teaches a method for executing a business process *(i.e. Current demands for quality systems imply requirements for synergistic integration of dynamic process and project planning, management and execution of work processes and people performing these tasks in different roles. Each individual user role exercises a different view over the work process, where the different views comprise different, partly overlapping functions over a work process, col. 3, lines 22-27)*, comprising:

obtaining an entity model *(i.e. the application of resources, as building teams, col. 15, lines 50-60)* representative of an entity *(i.e. a unique user-id; team-id, col. 5, lines 25-33)* to which a task associated with said business

process can be assigned *(i.e. For each instance of applying the building process for building a single house, or a set of houses in one large building project, instances of the project schema 102 are applied that reflect the customization requirements for each instance of building a house, under the constraints of the resources applied to the specific building project, col. 15, lines 50-60)*;

obtaining a work model *(i.e. A work process object (WPO), col. 3, lines 50-65)* representative of a task to be assigned to said entity *(i.e. A work process object (WPO) residing in a data base represents a work process as an integrated concept for process and project management, both for the definition of executable objects and for their eventual execution or interpretation, col. 3, lines 50-65)*;

assigning said task to said entity based on said entity model and said work model to thereby carry out said business process *(i.e. For each instance of applying the building process for building a single house, or a set of houses in one large building project, instances of the project schema 102 are applied that reflect the customization requirements for each instance of building a house, under the constraints of the resources applied to the specific building project, col. 15, lines 50-60)*;

receiving information regarding a result of an activity performed by said entity *(i.e. This is the case in the current example for all planning and monitoring activities where the result is directly entered into the work process object (WPO), col. 23, lines 20-36);* and

proposing a change *(i.e. It is advantageous that one dynamically changing work process object (WPO) represents a work process at its various points of definition and execution, and that several well defined views support the mapping between the stages of the work process object (WPO), col. 5, lines 1-11)* in said business process based on said information *(i.e. Parallel to the batch schedule assignment an assignment log is generated which can be used to reset all changes that follow the first detected inconsistency, col. 12, lines 50-57).*

As per claim 58, Leisten teaches a system for executing a business process *(i.e. Current demands for quality systems imply requirements for synergistic integration of dynamic process and project planning, management and execution of work processes and people performing these tasks in different roles. Each individual user role exercises a different view over the work process, where the different views comprise different, partly overlapping functions over a work process, col. 3, lines 22-27),* comprising a processor that is configured for:

obtaining an entity model *(i.e. the application of resources, as building teams, col. 15, lines 50-60)* representative of an entity *(i.e. , a unique user-id; team-id, col. 5, lines 25-33)* to which a task associated with said business process can be assigned *(i.e. Composite tasks have to be refined into simple executable tasks before actual start of task execution. Simple tasks need to be allocated to a unique user-id or team-id. An executable simple task can be allocated to a person or a member of team of persons that can be performing work interchangeably. Only for the reason of simplicity, teams are not discussed*

within this disclosure. For the same reason, tasks are executed by persons only, not by processors, col. 5, lines 25-33);

obtaining a work model *(i.e. A work process object (WPO), col. 3, lines 50-65)* representative of a task to be assigned to said entity *(i.e. A work process object (WPO) residing in a data base represents a work process as an integrated concept for process and project management, both for the definition of executable objects and for their eventual execution or interpretation, col. 3, lines 50-65)*;

assigning said task to said entity based on said entity model and said work model to thereby carry out said business process *(i.e. For each instance of applying the building process for building a single house, or a set of houses in one large building project, instances of the project schema 102 are applied that reflect the customization requirements for each instance of building a house, under the constraints of the resources applied to the specific building project, col. 15, lines 50-60)*; and

receiving information regarding a result of an activity performed by said entity *(i.e. This is the case in the current example for all planning and monitoring activities where the result is directly entered into the work process object (WPO), col. 23, lines 20-36);*

proposing a change *(i.e. It is advantageous that one dynamically changing work process object (WPO) represents a work process at its various points of definition and execution, and that several well defined views support the mapping between the stages of the work process object (WPO), col. 5, lines 1-11)* in said

business process based on said information *(i.e. Parallel to the batch schedule assignment an assignment log is generated which can be used to reset all changes that follow the first detected inconsistency, col. 12, lines 50-57).*

As per claim 55, Leisten teaches the method of claim 53, wherein said act of proposing said change is performed by a processor *(i.e. It is advantageous that one dynamically changing work process object (WPO) represents a work process at its various points of definition and execution, and that several well defined views support the mapping between the stages of the work process object (WPO), col. 5, lines 1-11)*

As per claim 56, Leisten teaches the method of claim 53, wherein said act of assigning is performed by a processor, which is configured to transmit a message to said entity to perform said task *(i.e. The person receiving a work order must return the information to the system on the acceptance of the work order, as to instruct the project management function about the start of the execution of the task, and has to report back to the system work progress and work termination, included some measurement parameters like total effort spent on a specific task, or reasons for deviation, col. 23, lines 20-36).*

As per claim 61, Leisten teaches the system of claim 58, wherein said processor is configured for assigning said task by sending message to said entity to instruct said entity to perform said task *(i.e. This is the case in the current*

example for all planning and monitoring activities where the result is directly entered into the work process object (WPO). But many of the activities in the current example relate to manual work. The instruction about tasks and activities and all their execution attributes will be handed to the executing persons in the form of a work order, for example in a printed form. The person receiving a work order must return the information to the system on the acceptance of the work order, as to instruct the project management function about the start of the execution of the task, and has to report back to the system work progress and work termination, included some measurement parameters like total effort spent on a specific task, or reasons for deviation, col. 23, lines 20-36).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a

later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-22, 32-39, 46-50, 52, 54, 57, 59, 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leisten et al. (US Patent No. 6,023,702), in view of Charisius et al. (US Patent No. 6,938,240).

As per claim 1, Leisten teaches a method for executing a business process *(i.e. management and execution of work processes and people performing these tasks in different roles, col. 3, lines 22-27)*, comprising:

obtaining an entity model *(i.e. the application of resources, as building teams, col. 15, lines 50-60)* representative of an entity *(i.e. a unique user-id; team-id, col. 5, lines 25-33)* to which task *(i.e. Composite tasks have to be refined into simple executable tasks before actual start of task execution. Simple tasks need to be allocated to a unique user-id or team-id, col. 5, lines 25-33; people performing these tasks in different roles. Each individual user role exercises a different view over the work process, where the different views comprise different, partly overlapping functions over a work process, col. 3, lines 22-27)* associated with said business process can be assigned *(i.e. For each instance of applying the building process for building a single house, or a set of houses in one large building project, instances of the project schema 102 are applied that reflect the customization requirements for each instance of building a house, under the constraints of the resources applied to the specific building project, col. 15, lines 50-60)*, wherein said entity model comprises information

regarding a work efficiency of said entity *(i.e. Composite tasks have to be refined into simple executable tasks before actual start of task execution. Simple tasks need to be allocated to a unique user-id or team-id. An executable simple task can be allocated to a person or a member of team of persons that can be performing work interchangeably. Only for the reason of simplicity, teams are not discussed within this disclosure. For the same reason, tasks are executed by persons only, not by processors, col. 5, lines 25-33)*;

obtaining a work model *(i.e. A work process object (WPO), col. 3, lines 50-65)* representative of a task to be assigned to said entity *(i.e. A work process object (WPO) residing in a data base represents a work process as an integrated concept for process and project management, both for the definition of executable objects and for their eventual execution or interpretation, col. 3, lines 50-65)*; and

assigning said task to said entity based on said entity model and said work model to thereby carry out said business process *(i.e. For each instance of applying the building process for building a single house, or a set of houses in one large building project, instances of the project schema 102 are applied that reflect the customization requirements for each instance of building a house, under the constraints of the resources applied to the specific building project, col. 15, lines 50-60)*.

Although Leisten implicitly teaches "work efficiency" as the constraints of the resources, col. 15, lines 50-60; his professional skills, col. 19, line 51 to col. 20, line 4, Leisten does not seem to fairly state the term.

Charisius, however, teaches an entity model *(i.e. Resource information, col. 28, line 64 to col. 29, line 16, See Fig. 54)* including an entity *(i.e. Joe Developer, See Fig. 54)*, wherein said entity model comprises information regarding a work efficiency *(i.e. one or more skill identifiers, or a skill strength, col. 29, lines 17-32)* of said entity *(i.e. Resource information 5404 may also include one or more skill identifiers that indicate one or more capabilities that a task of a plan may require for the task to be completed. Skill identifiers may include any foreseeable skill for the named resource, including a user, equipment, facilities, computer systems, or other known entities that may be assigned to any task of a plan. For example, when the named resource is an enterprise affiliate, the skill identifiers that may be identified for the enterprise affiliate may include: "Java programming," "architecture," or "carpentry." When the named resource is equipment, the skill identifiers may include "punch-press," "printing," or "Windows NT Operating System." Or, when the resource is another system, skills may involve the ability to execute specific functions (much like distributed or web services, "credit card validation," "shop for best air freight shipper prices"). Resource information 5404 may also include a skill strength (not shown) for each skill identifier. The skill strength may be used by the tool to differentiate one resource from another resource when matching a resource to a role of a task in a plan, col. 28, line 64 to col. 29, line 16).*

It would have been thus obvious to one of ordinary skill of the art having the teaching of Leisten and Charisius at the time the invention was made to modify the system of Leisten to include the limitations as taught by Charisius.

One of ordinary skill in the art would be motivated to make this combination in order to have the skill strength may be used by the tool to differentiate one resource from another resource when matching a resource to a role of a task in a plan in view of Charisius (col. 28, line 64 to col. 29, line 16), as doing so would give the added benefit of providing an integrated process modeling and project planning tool that allows an enterprise affiliate to improving a workflow that models a process as taught by Charisius (Abstract).

As per claim 32, Leisten teaches a computer product having a computer-readable medium for storing a set of instructions *(i.e. Current demands for quality systems imply requirements for synergistic integration of dynamic process and project planning, management and execution of work processes and people performing these tasks in different roles. Each individual user role exercises a different view over the work process, where the different views comprise different, partly overlapping functions over a work process, col. 3, lines 22-27),* the execution of which by a processor causes a process to be performed, the process comprising providing an entity template *(i.e. the application of resources, as building teams, col. 15, lines 50-60)* representative of an entity *(i.e. a unique user-id; team-id, col. 5, lines 25-33)* to which a task *(i.e. Composite tasks have to be refined into simple executable tasks before actual start of task execution. Simple tasks need to be allocated to a unique user-id or team-id. An executable simple task can be allocated to a person or a member of team of persons that can be performing work interchangeably. Only for the reason of simplicity, teams*

are not discussed within this disclosure. For the same reason, tasks are executed by persons only, not by processors, col. 5, lines 25-33) associated with a business process can be assigned *(i.e. Composite tasks have to be refined into simple executable tasks before actual start of task execution. Simple tasks need to be allocated to a unique user-id or team-id. An executable simple task can be allocated to a person or a member of team of persons that can be performing work interchangeably. Only for the reason of simplicity, teams are not discussed within this disclosure. For the same reason, tasks are executed by persons only, not by processors, col. 5, lines 25-33),* wherein said entity template comprises information regarding a work efficiency of said entity *(i.e. For each instance of applying the building process for building a single house, or a set of houses in one large building project, instances of the project schema 102 are applied that reflect the customization requirements for each instance of building a house, under the constraints of the resources applied to the specific building project, col. 15, lines 50-60)*.

Although Leisten implicitly teaches "work efficiency" as the constraints of the resources, col. 15, lines 50-60; his professional skills, col. 19, line 51 to col. 20, line 4, Leisten does not seem to fairly state the term.

Charisius, however, teaches an entity model *(i.e. Resource information, col. 28, line 64 to col. 29, line 16, See Fig. 54)* including an entity *(i.e. Joe Developer, See Fig. 54),* wherein said entity model comprises information regarding a work efficiency *(i.e. one or more skill identifiers, or a skill strength, col. 29, lines 17-32)* of said entity *(i.e. Resource information 5404 may also*

include one or more skill identifiers that indicate one or more capabilities that a task of a plan may require for the task to be completed. Skill identifiers may include any foreseeable skill for the named resource, including a user, equipment, facilities, computer systems, or other known entities that may be assigned to any task of a plan. For example, when the named resource is an enterprise affiliate, the skill identifiers that may be identified for the enterprise affiliate may include: "Java programming," "architecture," or "carpentry." When the named resource is equipment, the skill identifiers may include "punch-press," "printing," or "Windows NT Operating System." Or, when the resource is another system, skills may involve the ability to execute specific functions (much like distributed or web services, "credit card validation," "shop for best air freight shipper prices"). Resource information 5404 may also include a skill strength (not shown) for each skill identifier. The skill strength may be used by the tool to differentiate one resource from another resource when matching a resource to a role of a task in a plan, col. 28, line 64 to col. 29, line 16).

It would have been thus obvious to one of ordinary skill of the art having the teaching of Leisten and Charisius at the time the invention was made to modify the system of Leisten to include the limitations as taught by Charisius. One of ordinary skill in the art would be motivated to make this combination in order to have the skill strength may be used by the tool to differentiate one resource from another resource when matching a resource to a role of a task in a plan in view of Charisius (col. 28, line 64 to col. 29, line 16), as doing so would give the added benefit of providing an integrated process modeling and project

planning tool that allows an enterprise affiliate to improving a workflow that models a process as taught by Charisius (Abstract).

As per claim 36, Leisten teaches a computer product having a computer-readable medium for storing a set of instructions *(i.e. Current demands for quality systems imply requirements for synergistic integration of dynamic process and project planning, management and execution of work processes and people performing these tasks in different roles. Each individual user role exercises a different view over the work process, where the different views comprise different, partly overlapping functions over a work process, col. 3, lines 22-27),* the execution of which causes a process to be performed, said process comprising providing a user interface for allowing a user to create an entity model *(i.e. the application of resources, as building teams, col. 15, lines 50-60)* representative of an entity *(i.e. a unique user-id; team-id, col. 5, lines 25-33)* to which a task *(i.e. Composite tasks have to be refined into simple executable tasks before actual start of task execution. Simple tasks need to be allocated to a unique user-id or team-id. An executable simple task can be allocated to a person or a member of team of persons that can be performing work interchangeably. Only for the reason of simplicity, teams are not discussed within this disclosure. For the same reason, tasks are executed by persons only, not by processors, col. 5, lines 25-33)* associated with a business process can be assigned, wherein said entity model comprises information regarding a work efficiency of said entity *(i.e. For each instance of applying the building process for*

building a single house, or a set of houses in one large building project, instances of the project schema 102 are applied that reflect the customization requirements for each instance of building a house, under the constraints of the resources applied to the specific building project, col. 15, lines 50-60).
Although Leisten implicitly teaches "work efficiency" as the constraints of the resources, col. 15, lines 50-60; his professional skills, col. 19, line 51 to col. 20, line 4, Leisten does not seem to fairly state the term.

Charisius, however, teaches an entity model *(i.e. Resource information, col. 28, line 64 to col. 29, line 16, See Fig. 54)* including an entity *(i.e. Joe Developer, See Fig. 54),* wherein said entity model comprises information regarding a work efficiency *(i.e. one or more skill identifiers, or a skill strength, col. 29, lines 17-32)* of said entity *(i.e. Resource information 5404 may also include one or more skill identifiers that indicate one or more capabilities that a task of a plan may require for the task to be completed. Skill identifiers may include any foreseeable skill for the named resource, including a user, equipment, facilities, computer systems, or other known entities that may be assigned to any task of a plan. For example, when the named resource is an enterprise affiliate, the skill identifiers that may be identified for the enterprise affiliate may include: "Java programming," "architecture," or "carpentry." When the named resource is equipment, the skill identifiers may include "punch-press," "printing," or "Windows NT Operating System." Or, when the resource is another system, skills may involve the ability to execute specific functions (much like distributed or web services, "credit card validation," "shop for best air freight*

shipper prices"). Resource information 5404 may also include a skill strength (not shown) for each skill identifier. The skill strength may be used by the tool to differentiate one resource from another resource when matching a resource to a role of a task in a plan, col. 28, line 64 to col. 29, line 16).

a user interface *(See Fig. 54)* for allowing a user to create *(i.e. adding resource, col. 28, lines 16-29)* an entity model *(i.e. Adding A Resource, FIG. 53 depicts a flow diagram illustrating an exemplary process performed by the Client Interface 134 to add a new resource to the list of available resources. The Client Interface 134 may later assign the resource to a plan in accordance with methods and systems consistent with the present invention. Initially, the Client Interface 134 receives a request to add a new resource (step 5302). As shown in FIG. 54, the Client Interface 134 may receive the request to add a new resource via a pull-down menu selection 5402 and 5404 that is chosen by an enterprise affiliate. The enterprise affiliate may, however, use any known data input technique, such as an icon or keyboard input, to indicate the request to the Client Interface 134, col. 28, lines 16-29).*

It would have been thus obvious to one of ordinary skill of the art having the teaching of Leisten and Charisius at the time the invention was made to modify the system of Leisten to include the limitations as taught by Charisius. One of ordinary skill in the art would be motivated to make this combination in order to have the skill strength may be used by the tool to differentiate one resource from another resource when matching a resource to a role of a task in a plan in view of Charisius (col. 28, line 64 to col. 29, line 16), as doing so would

give the added benefit of providing an integrated process modeling and project planning tool that allows an enterprise affiliate to improving a workflow that models a process as taught by Charisius (Abstract).

As per claim 46, Leisten teaches a computer-implemented system for business process automation *(i.e. Current demands for quality systems imply requirements for synergistic integration of dynamic process and project planning, management and execution of work processes and people performing these tasks in different roles. Each individual user role exercises a different view over the work process, where the different views comprise different, partly overlapping functions over a work process, col. 3, lines 22-27)* and optimization, comprising:

a business process creation module for allowing a user to create an entity model *(i.e. the application of resources, as building teams, col. 15, lines 50-60)* and a business process model that represents a business process, said business process model having one or more work steps *(i.e. For each instance of applying the building process for building a single house, or a set of houses in one large building project, instances of the project schema 102 are applied that reflect the customization requirements for each instance of building a house, under the constraints of the resources applied to the specific building project, col. 15, lines 50-60)*, wherein said entity model represents an entity *(i.e. a unique user-id; team-id, col. 5, lines 25-33)* to which a task associated with said business process can be assigned, said entity model comprising information regarding a work efficiency of said entity *(i.e. Composite tasks have to be refined into simple*

executable tasks before actual start of task execution. Simple tasks need to be allocated to a unique user-id or team-id. An executable simple task can be allocated to a person or a member of team of persons that can be performing work interchangeably. Only for the reason of simplicity, teams are not discussed within this disclosure. For the same reason, tasks are executed by persons only, not by processors, col. 5, lines 25-33); and

a business process execution and monitoring module configured to assign one or more tasks *(i.e. Composite tasks have to be refined into simple executable tasks before actual start of task execution. Simple tasks need to be allocated to a unique user-id or team-id. An executable simple task can be allocated to a person or a member of team of persons that can be performing work interchangeably. Only for the reason of simplicity, teams are not discussed within this disclosure. For the same reason, tasks are executed by persons only, not by processors, col. 5, lines 25-33)* to one or more entities based on said business process model *(i.e. A work process object (WPO) (1001) is created, residing in a data base, and stored in a memory of the process and project management computer system (1030). All data concerning the process and project management are reported to said work process object (WPO) (1001) and said work process object (WPO) (1001) is used as a common data base, Abstract)* ;

wherein said business process creation module is implemented at least in part by a processor *(i.e. Current demands for quality systems imply requirements for synergistic integration of dynamic process and project planning, management*

and execution of work processes and people performing these tasks in different roles. Each individual user role exercises a different view over the work process, where the different views comprise different, partly overlapping functions over a work process, col. 3, lines 22-27).

Although Leisten implicitly teaches "work efficiency" as the constraints of the resources, col. 15, lines 50-60; his professional skills, col. 19, line 51 to col. 20, line 4, Leisten does not seem to fairly state the term.

Charisius, however, teaches an entity model *(i.e. Resource information, col. 28, line 64 to col. 29, line 16, See Fig. 54)* including an entity *(i.e. Joe Developer, See Fig. 54),* wherein said entity model comprises information regarding a work efficiency *(i.e. one or more skill identifiers, or a skill strength, col. 29, lines 17-32)* of said entity *(i.e. Resource information 5404 may also include one or more skill identifiers that indicate one or more capabilities that a task of a plan may require for the task to be completed. Skill identifiers may include any foreseeable skill for the named resource, including a user, equipment, facilities, computer systems, or other known entities that may be assigned to any task of a plan. For example, when the named resource is an enterprise affiliate, the skill identifiers that may be identified for the enterprise affiliate may include: "Java programming," "architecture," or "carpentry." When the named resource is equipment, the skill identifiers may include "punch-press," "printing," or "Windows NT Operating System." Or, when the resource is another system, skills may involve the ability to execute specific functions (much like distributed or web services, "credit card validation," "shop for best air freight*

shipper prices"). Resource information 5404 may also include a skill strength (not shown) for each skill identifier. The skill strength may be used by the tool to differentiate one resource from another resource when matching a resource to a role of a task in a plan, col. 28, line 64 to col. 29, line 16).

It would have been thus obvious to one of ordinary skill of the art having the teaching of Leisten and Charisius at the time the invention was made to modify the system of Leisten to include the limitations as taught by Charisius. One of ordinary skill in the art would be motivated to make this combination in order to have the skill strength may be used by the tool to differentiate one resource from another resource when matching a resource to a role of a task in a plan in view of Charisius (col. 28, line 64 to col. 29, line 16), as doing so would give the added benefit of providing an integrated process modeling and project planning tool that allows an enterprise affiliate to improving a workflow that models a process as taught by Charisius (Abstract).

As per claim 50, Leisten teaches a method for executing a business process *(i.e. Current demands for quality systems imply requirements for synergistic integration of dynamic process and project planning, management and execution of work processes and people performing these tasks in different roles. Each individual user role exercises a different view over the work process, where the different views comprise different, partly overlapping functions over a work process, col. 3, lines 22-27)*, comprising:

obtaining an entity model *(i.e. the application of resources, as building teams, col. 15, lines 50-60)* representative of a person *(i.e. , a unique user-id; team-id, col. 5, lines 25-33)* to which a task *(i.e. Composite tasks have to be refined into simple executable tasks before actual start of task execution. Simple tasks need to be allocated to a unique user-id or team-id. An executable simple task can be allocated to a person or a member of team of persons that can be performing work interchangeably. Only for the reason of simplicity, teams are not discussed within this disclosure. For the same reason, tasks are executed by persons only, not by processors, col. 5, lines 25-33)* associated with said business process can be assigned, wherein said entity model comprises information regarding a work efficiency of said person *(i.e. For each instance of applying the building process for building a single house, or a set of houses in one large building project, instances of the project schema 102 are applied that reflect the customization requirements for each instance of building a house, under the constraints of the resources applied to the specific building project, col. 15, lines 50-60)*;

obtaining a work model *(i.e. A work process object (WPO), col. 3, lines 50-65)* representative of a task to be assigned to said person *(i.e. A work process object (WPO) residing in a data base represents a work process as an integrated concept for process and project management, both for the definition of executable objects and for their eventual execution or interpretation, col. 3, lines 50-65)*;

assigning said task to said person based on said entity model and said work model to thereby carry out said business process *(i.e. For each instance of applying the building process for building a single house, or a set of houses in one large building project, instances of the project schema 102 are applied that reflect the customization requirements for each instance of building a house, under the constraints of the resources applied to the specific building project, col. 15, lines 50-60)*.

wherein said act of assigning said task is performed using a processor *(i.e. Composite tasks have to be refined into simple executable tasks before actual start of task execution. Simple tasks need to be allocated to a unique user-id or team-id. An executable simple task can be allocated to a person or a member of team of persons that can be performing work interchangeably. Only for the reason of simplicity, teams are not discussed within this disclosure. For the same reason, tasks are executed by persons only, not by processors, col. 5, lines 25-33)*, which is configured to transmit a message to said person to instruct said person to perform said task *(i.e. The person receiving a work order must return the information to the system on the acceptance of the work order, as to instruct the project management function about the start of the execution of the task, and has to report back to the system work progress and work termination, included some measurement parameters like total effort spent on a specific task, or reasons for deviation, col. 23, lines 20-36)*.

Although Leisten implicitly teaches "work efficiency" as the constraints of the resources, col. 15, lines 50-60; his professional skills, col. 19, line 51 to col. 20, line 4, Leisten does not seem to fairly state the term.

Charisius, however, teaches an entity model *(i.e. Resource information, col. 28, line 64 to col. 29, line 16, See Fig. 54)* including an entity *(i.e. Joe Developer, See Fig. 54),* wherein said entity model comprises information regarding a work efficiency *(i.e. one or more skill identifiers, or a skill strength, col. 29, lines 17-32)* of said entity *(i.e. Resource information 5404 may also include one or more skill identifiers that indicate one or more capabilities that a task of a plan may require for the task to be completed. Skill identifiers may include any foreseeable skill for the named resource, including a user, equipment, facilities, computer systems, or other known entities that may be assigned to any task of a plan. For example, when the named resource is an enterprise affiliate, the skill identifiers that may be identified for the enterprise affiliate may include: "Java programming," "architecture," or "carpentry." When the named resource is equipment, the skill identifiers may include "punch-press," "printing," or "Windows NT Operating System." Or, when the resource is another system, skills may involve the ability to execute specific functions (much like distributed or web services, "credit card validation," "shop for best air freight shipper prices"). Resource information 5404 may also include a skill strength (not shown) for each skill identifier. The skill strength may be used by the tool to differentiate one resource from another resource when matching a resource to a role of a task in a plan, col. 28, line 64 to col. 29, line 16).*

It would have been thus obvious to one of ordinary skill of the art having the teaching of Leisten and Charisius at the time the invention was made to modify the system of Leisten to include the limitations as taught by Charisius. One of ordinary skill in the art would be motivated to make this combination in order to have the skill strength may be used by the tool to differentiate one resource from another resource when matching a resource to a role of a task in a plan in view of Charisius (col. 28, line 64 to col. 29, line 16), as doing so would give the added benefit of providing an integrated process modeling and project planning tool that allows an enterprise affiliate to improving a workflow that models a process as taught by Charisius (Abstract).

As to claims 2, 35, 39, 49, Charisius said entity is selected form the group consisting of a person, a group of persons, a machine, a device, a software, a company, an association, and a country *(i.e. Resource information 5404 may also include one or more skill identifiers that indicate one or more capabilities that a task of a plan may require for the task to be completed. Skill identifiers may include any foreseeable skill for the named resource, including a user, equipment, facilities, computer systems, or other known entities that may be assigned to any task of a plan. For example, when the named resource is an enterprise affiliate, the skill identifiers that may be identified for the enterprise affiliate may include: "Java programming," "architecture," or "carpentry." When the named resource is equipment, the skill identifiers may include "punch-press," "printing," or "Windows NT Operating System." Or, when the resource is another*

system, skills may involve the ability to execute specific functions (much like distributed or web services, "credit card validation," "shop for best air freight shipper prices"). Resource information 5404 may also include a skill strength (not shown) for each skill identifier. The skill strength may be used by the tool to differentiate one resource from another resource when matching a resource to a role of a task in a plan, col. 28, line 64 to col. 29, line 16).

As per claim 3, Charisius teaches the method of claim 1, wherein said entity model is obtained by selecting an entity template form a plurality of available entity templates, each of said plurality of available entity templates associated with an entity to which a task can be assigned *(See Fig. 54).*

As per claim 4, Charisius teaches the method of claim 1, wherein said entity model is obtained by creating said entity model *(i.e. Adding A Resource, FIG. 53 depicts a flow diagram illustrating an exemplary process performed by the Client Interface 134 to add a new resource to the list of available resources. The Client Interface 134 may later assign the resource to a plan in accordance with methods and systems consistent with the present invention. Initially, the Client Interface 134 receives a request to add a new resource (step 5302). As shown in FIG. 54, the Client Interface 134 may receive the request to add a new resource via a pull-down menu selection 5402 and 5404 that is chosen by an enterprise affiliate. The enterprise affiliate may, however, use any known data*

input technique, such as an icon or keyboard input, to indicate the request to the Client Interface 134, col. 28, lines 16-29).

As per claim 5, Charisius teaches the method of claim 4, wherein said creating includes generating a record *(See Fig. 54)*, assigning an entity identification to the record, and inputting an attribute to the record, said attribute representative of a characteristic of said entity *(i.e. Adding A Resource, FIG. 53 depicts a flow diagram illustrating an exemplary process performed by the Client Interface 134 to add a new resource to the list of available resources. The Client Interface 134 may later assign the resource to a plan in accordance with methods and systems consistent with the present invention. Initially, the Client Interface 134 receives a request to add a new resource (step 5302). As shown in FIG. 54, the Client Interface 134 may receive the request to add a new resource via a pull-down menu selection 5402 and 5404 that is chosen by an enterprise affiliate. The enterprise affiliate may, however, use any known data input technique, such as an icon or keyboard input, to indicate the request to the Client Interface 134, col. 28, lines 16-29).*

As per claim 6, Charisius teaches the method of claim 1, wherein said entity model is obtained by retrieving said entity model from a database *(i.e. Resource information 5404 may also include one or more skill identifiers that indicate one or more capabilities that a task of a plan may require for the task to be completed. Skill identifiers may include any foreseeable skill for the named*

resource, including a user, equipment, facilities, computer systems, or other known entities that may be assigned to any task of a plan. For example, when the named resource is an enterprise affiliate, the skill identifiers that may be identified for the enterprise affiliate may include: "Java programming," "architecture," or "carpentry." When the named resource is equipment, the skill identifiers may include "punch-press," "printing," or "Windows NT Operating System." Or, when the resource is another system, skills may involve the ability to execute specific functions (much like distributed or web services, "credit card validation," "shop for best air freight shipper prices"). Resource information 5404 may also include a skill strength (not shown) for each skill identifier. The skill strength may be used by the tool to differentiate one resource from another resource when matching a resource to a role of a task in a plan, col. 28, line 64 to col. 29, line 16).

As per claim 7, Leisten teaches the method of claim 1, wherein said work model is obtained by selecting a task template form a plurality of available task templates, each of said plurality of task templates associated with a task that can be assigned to an entity *(i.e. A work process object (WPO) residing in a data base represents a work process as an integrated concept for process and project management, both for the definition of executable objects and for their eventual execution or interpretation, col. 3, lines 50-65).*

As per claim 8, Leisten teaches the method of claim 7, wherein each of the available task templates includes an instruction for performing a task *(i.e. A work process object (WPO) residing in a data base represents a work process as an integrated concept for process and project management, both for the definition of executable objects and for their eventual execution or interpretation, col. 3, lines 50-65).*

As per claim 9, Leisten teaches the method of claim 1, wherein said work model *(i.e. A work process object (WPO))* is obtained by creating said work model *(i.e. A work process object (WPO) (1001) is created, residing in a data base, and stored in a memory of the process and project management computer system (1030). All data concerning the process and project management are reported to said work process object (WPO) (1001) and said work process object (WPO) (1001) is used as a common data base, Abstract).*

As per claim 10, Leisten teaches the method of claim 9, wherein said creating comprises inputting one or more tasks to be performed by an entity *(i.e. The present invention discloses a work process object (WPO) recording all data from the process schema through the execution of the last task in a project. The work process object (WPO) has the conceptual basic structure of a directed graph, built from activity nodes, linked by control connectors, splits, and joins. Within this work process object (WPO) a number of sub-objects may be created that are related to individual attributes of activities in the graph. The architecture*

of these work process objects and some of the rules and procedures for their dynamic behaviour represent the inventive aspects in the present application, col. 7, line 61 to col. 8, line 4).

As per claim 11, Leisten teaches the method of claim 9, wherein said creating comprises inputting an instruction for performing a task *(i.e. The present invention discloses a work process object (WPO) recording all data from the process schema through the execution of the last task in a project. The work process object (WPO) has the conceptual basic structure of a directed graph, built from activity nodes, linked by control connectors, splits, and joins. Within this work process object (WPO) a number of sub-objects may be created that are related to individual attributes of activities in the graph. The architecture of these work process objects and some of the rules and procedures for their dynamic behaviour represent the inventive aspects in the present application, col. 7, line 61 to col. 8, line 4).*

As per claim 12, Leisten teaches the method of claim 11, wherein said work model is obtained by retrieving said work model from a data base *(i.e. A work process object (WPO) (1001) is created, residing in a data base, and stored in a memory of the process and project management computer system (1030). All data concerning the process and project management are reported to said work process object (WPO) (1001) and said work process object (WPO) (1001) is used as a common data base, Abstract).*

As per claim 13, Leisten teaches the method of claim 1, further comprising creating a business process model using said entity model *(i.e. people performing these tasks in different roles. Each individual user role exercises a different view over the work process, where the different views comprise different, partly overlapping functions over a work process, col. 3, lines 22-27)* and said work model *(i.e. The present invention discloses a work process object (WPO) recording all data from the process schema through the execution of the last task in a project. The work process object (WPO) has the conceptual basic structure of a directed graph, built from activity nodes, linked by control connectors, splits, and joins. Within this work process object (WPO) a number of sub-objects may be created that are related to individual attributes of activities in the graph. The architecture of these work process objects and some of the rules and procedures for their dynamic behaviour represent the inventive aspects in the present application, col. 7, line 61 to col. 8, line 4)*.

As per claim 14, Leisten teaches the method of claim 13, wherein said creating business process model comprises constructing a flow chart, said flow chart having at least one work step *(i.e. The present invention discloses a work process object (WPO) recording all data from the process schema through the execution of the last task in a project. The work process object (WPO) has the conceptual basic structure of a directed graph, built from activity nodes, linked by control connectors, splits, and joins. Within this work process object (WPO) a number of sub-objects may be created that are related to individual attributes of*

activities in the graph. The architecture of these work process objects and some of the rules and procedures for their dynamic behaviour represent the inventive aspects in the present application, col. 7, line 61 to col. 8, line 4).

As per claim 15, Leisten teaches the method of claim 14, wherein said at least one work step represents said task that is to be assigned to said entity *(i.e. The present invention discloses a work process object (WPO) recording all data from the process schema through the execution of the last task in a project. The work process object (WPO) has the conceptual basic structure of a directed graph, built from activity nodes, linked by control connectors, splits, and joins. Within this work process object (WPO) a number of sub-objects may be created that are related to individual attributes of activities in the graph. The architecture of these work process objects and some of the rules and procedures for their dynamic behaviour represent the inventive aspects in the present application, col. 7, line 61 to col. 8, line 4).*

As per claim 16, Leisten teaches the method of claim 1, wherein said assigning is performed by a software of a human *(i.e. Composite tasks have to be refined into simple executable tasks before actual start of task execution. Simple tasks need to be allocated to a unique user-id or team-id, col. 5, lines 25-33; people performing these tasks in different roles. Each individual user role exercises a different view over the work process, where the different views*

comprise different, partly overlapping functions over a work process, col. 3, lines 22-27).

As per claim 17, Charisius teaches the method of claim 1, further comprising collecting data associated with work performed by said entity *(i.e. FIG. 56 depicts an exemplary resource file 5600 that the Client Interface 134 may use to store resource profiles 5602, 5604, 5606, and 5608 on WebDAV Storage 142. As shown in FIG. 56, the resource profile 5600 includes a unique identifier or URL 5612 where the resource profile 5600 is to be stored on the WebDAV Storage 142. Each resource profile 5602, 5604, 5606, and 5608 may be stored separately by the Client Interface 134 on WebDAV Storage 142, col. 30, lines 1-8).*

As per claim 18, Charisius teaches the method of claim 17, further comprising comparing said data with data associated with a previously created business process *(i.e. In another implementation, the Client Interface 134 may compare a skill of the resource-most-often-assigned (e.g., "MG") to the skills in role profiles other than "Assembler" role profile 7604 in order to identify an optimal role that may be assigned to responsible role 6806 for activity 6801. For example, the Client Interface 134 may compare skill 7710 of "MG" resource profile 7704 to skills 7622 and 7624 of role profiles 7606 and 7608, respecively. In this example, the Client Interface 134 is able to identify that skill 7622 of role*

profile 7606 matches skill 7624 of role profile 7608 corresponding to "Gopher" role 7620, col. 44, lines 15-25).

As per claim 19, Charisius teaches the method of claim 18, further comprising optimizing said business process based on said comparing *(i.e. In another implementation, the Client Interface 134 may compare a skill of the resource-most-often-assigned (e.g., "MG") to the skills in role profiles other than "Assembler" role profile 7604 in order to identify an optimal role that may be assigned to responsible role 6806 for activity 6801. For example, the Client Interface 134 may compare skill 7710 of "MG" resource profile 7704 to skills 7622 and 7624 of role profiles 7606 and 7608, respecively. In this example, the Client Interface 134 is able to identify that skill 7622 of role profile 7606 matches skill 7624 of role profile 7608 corresponding to "Gopher" role 7620, col. 44, lines 15-25).*

As per claim 20, Charisius teaches the method of claim 19, further comprising creating a business process model using said entity model and said work model, wherein said creating said business process model comprises constructing a flow chart, said flow chart having a work step, and said optimizing comprising substituting *(i.e. replaced)* said work step with a previously created work step *(i.e. In addition, the conditions-to-check received by the Client Interface 134 may include a new-successor condition 7006. When processing new-successor condition 7006, the Client Interface 134 checks if a planned-*

successor 7020 for the task has been replaced with a new successor, such as a manually entered task or a non-default path for the task entered by the enterprise affiliate using the Client Interface 134. Planned-successor 7020 corresponds to a default-successor-property (6808 in FIG. 68 and 7022 in FIG. 70) for "Get Parts" activity 6801. The conditions-to-check 7002, 7004, and 7006 are described in greater detail below, col. 34, lines 21-31).

As per claim 21, Charisius teaches the method of claim 19, wherein said optimizing comprises substituting said work model with a previously created work model *(i.e. In addition, the conditions-to-check received by the Client Interface 134 may include a new-successor condition 7006. When processing new-successor condition 7006, the Client Interface 134 checks if a planned-successor 7020 for the task has been replaced with a new successor, such as a manually entered task or a non-default path for the task entered by the enterprise affiliate using the Client Interface 134. Planned-successor 7020 corresponds to a default-successor-property (6808 in FIG. 68 and 7022 in FIG. 70) for "Get Parts" activity 6801. The conditions-to-check 7002, 7004, and 7006 are described in greater detail below, col. 34, lines 21-31).*

As per claim 22, Charisius teaches the method of claim 19, further comprising adopting said optimized business process as a standard *(i.e. In another implementation, the Client Interface 134 may compare a skill of the resource-most-often-assigned (e.g., "MG") to the skills in role profiles other than*

"Assembler" role profile 7604 in order to identify an optimal role that may be assigned to responsible role 6806 for activity 6801. For example, the Client Interface 134 may compare skill 7710 of "MG" resource profile 7704 to skills 7622 and 7624 of role profiles 7606 and 7608, respecively. In this example, the Client Interface 134 is able to identify that skill 7622 of role profile 7606 matches skill 7624 of role profile 7608 corresponding to "Gopher" role 7620, col. 44, lines 15-25).

As per claim 33, Leisten teaches the computer product of claim 32, wherein said process further comprises providing a work template representative of a task which can be assigned to said entity *(i.e. Composite tasks have to be refined into simple executable tasks before actual start of task execution. Simple tasks need to be allocated to a unique user-id or team-id, col. 5, lines 25-33; people performing these tasks in different roles. Each individual user role exercises a different view over the work process, where the different views comprise different, partly overlapping functions over a work process, col. 3, lines 22-27).*

As per claim 34, Leisten teaches the computer product of claim 33, wherein said process further comprises assigning said task to said entity *(i.e. Composite tasks have to be refined into simple executable tasks before actual start of task execution. Simple tasks need to be allocated to a unique user-id or team-id, col. 5, lines 25-33; people performing these tasks in different roles. Each*

individual user role exercises a different view over the work process, where the different views comprise different, partly overlapping functions over a work process, col. 3, lines 22-27).

As per claim 37, Leisten teaches the computer product of claim 36, wherein said process further comprises providing a user interface for allowing a user to creating a work model representative of a task that can be assigned to said entity *(i.e. A work process object (WPO) (1001) is created, residing in a data base, and stored in a memory of the process and project management computer system (1030). All data concerning the process and project management are reported to said work process object (WPO) (1001) and said work process object (WPO) (1001) is used as a common data base, Abstract).*

As per claim 38, Leisten teaches the computer of claim 37, wherein said process further comprises assigning said task to said entity *(i.e. Composite tasks have to be refined into simple executable tasks before actual start of task execution. Simple tasks need to be allocated to a unique user-id or team-id, col. 5, lines 25-33; people performing these tasks in different roles. Each individual user role exercises a different view over the work process, where the different views comprise different, partly overlapping functions over a work process, col. 3, lines 22-27).*

As per claim 47, Leisten teaches the system of claim 46, further comprising a business process analysis and optimization module for optimizing a business process based on data collected *(i.e. The present invention discloses a work process object (WPO) recording all data from the process schema through the execution of the last task in a project, col. 7, line 61 to col. 8, line 4)* form execution of said one or more tasks *(i.e. Of course his work is guided by control documents, the building plan as visible in the task chart shown in FIG. 6, but it is his responsibility to perform his work according to his professional skills, interpreting the building plan as visible in the task chart shown in FIG. 6. The process will contain elements of checking that work is executed according to plans, in this example summarized in the final usage permits UPEs 304.1 and 304.2 for the completed houses. In a real project of course many more checks will be imbedded in the process in order to detect deviations from the building plan as visible in the task chart shown in FIG. 6 early enough to avoid accumulation of later error correction through re-work, col. 19, line 51 col. 20, line 4)*.

As per claim 48, Leisten teaches the system of claim 46, further comprising a business process simulation module for checking said business process model for errors *(i.e. In exceptional cases a domain boundary may have to be reset upwards, for necessary rework, reediting or error correction in a previously completed partition. It will be an explicit decision by the person*

executing a view dialogue, where to place the domain boundary, declaring a partition completed, col. 8, lines 23-40).

As per claim 52, Charisius teaches the method of claim 50, wherein said entity model is obtained by selecting an entity template from a plurality of available entity templates *(Fig. 45)*.

As per claim 54, Leisten teaches the method of claim 53, wherein said entity model comprises information regarding a work efficiency of said entity *(i.e. his professional skills, col. 19, line 51 to col. 20, line 4)*.

Although Leisten implicitly teaches "work efficiency" as the constraints of the resources, col. 15, lines 50-60; his professional skills, col. 19, line 51 to col. 20, line 4, Leisten does not seem to fairly state the term.

Charisius, however, teaches an entity model *(i.e. Resource information, col. 28, line 64 to col. 29, line 16, See Fig. 54)* including an entity *(i.e. Joe Developer, See Fig. 54)*, wherein said entity model comprises information regarding a work efficiency *(i.e. one or more skill identifiers, or a skill strength, col. 29, lines 17-32)* of said entity *(i.e. Resource information 5404 may also include one or more skill identifiers that indicate one or more capabilities that a task of a plan may require for the task to be completed. Skill identifiers may include any foreseeable skill for the named resource, including a user, equipment, facilities, computer systems, or other known entities that may be assigned to any task of a plan. For example, when the named resource is an*

enterprise affiliate, the skill identifiers that may be identified for the enterprise affiliate may include: "Java programming," "architecture," or "carpentry." When the named resource is equipment, the skill identifiers may include "punch-press," "printing," or "Windows NT Operating System." Or, when the resource is another system, skills may involve the ability to execute specific functions (much like distributed or web services, "credit card validation," "shop for best air freight shipper prices"). Resource information 5404 may also include a skill strength (not shown) for each skill identifier. The skill strength may be used by the tool to differentiate one resource from another resource when matching a resource to a role of a task in a plan, col. 28, line 64 to col. 29, line 16).

It would have been thus obvious to one of ordinary skill of the art having the teaching of Leisten and Charisius at the time the invention was made to modify the system of Leisten to include the limitations as taught by Charisius. One of ordinary skill in the art would be motivated to make this combination in order to have the skill strength may be used by the tool to differentiate one resource from another resource when matching a resource to a role of a task in a plan in view of Charisius (col. 28, line 64 to col. 29, line 16), as doing so would give the added benefit of providing an integrated process modeling and project planning tool that allows an enterprise affiliate to improving a workflow that models a process as taught by Charisius (Abstract).

As per claim 57, Leisten teaches the method of claim 53, wherein said entity model is obtained by selecting an entity template *(i.e. In the following the*

term "resource" will be used to denote the unique personnel resource, either a person or a team assigned to the same task, col. 18, lines 6-21) of available entity templates *(i.e. the application of resources, as building teams, col. 15, lines 50-60).*

Leisten implicitly teaches "template" as application resources, col. 15, lines 50-60.

Charisius clearly teaches template in Fig. 45.

It would have been obvious to one of ordinary skill of the art having the teaching of Leisten and Charisius at the time the invention was made to modify the system of Leisten to include the limitations as taught by Charisius. One of ordinary skill in the art would be motivated to make this combination in order to have the skill strength may be used by the tool to differentiate one resource from another resource when matching a resource to a role of a task in a plan in view of Charisius (col. 28, line 64 to col. 29, line 16), as doing so would give the added benefit of providing an integrated process modeling and project planning tool that allows an enterprise affiliate to improving a workflow that models a process as taught by Charisius (Abstract).

As per claim 59, Leisten teaches the system of claim 58, wherein said entity model comprises information regarding a work efficiency of said entity *(i.e. his professional skills, col. 19, line 51 to col. 20, line 4).*

Although Leisten implicitly teaches "work efficiency" as the constraints of the resources, col. 15, lines 50-60; his professional skills, col. 19, line 51 to col. 20, line 4, Leisten does not seem to fairly state the term.

Charisius, however, teaches an entity model *(i.e. Resource information, col. 28, line 64 to col. 29, line 16, See Fig. 54)* including an entity *(i.e. Joe Developer, See Fig. 54),* wherein said entity model comprises information regarding a work efficiency *(i.e. one or more skill identifiers, or a skill strength, col. 29, lines 17-32)* of said entity *(i.e. Resource information 5404 may also include one or more skill identifiers that indicate one or more capabilities that a task of a plan may require for the task to be completed. Skill identifiers may include any foreseeable skill for the named resource, including a user, equipment, facilities, computer systems, or other known entities that may be assigned to any task of a plan. For example, when the named resource is an enterprise affiliate, the skill identifiers that may be identified for the enterprise affiliate may include: "Java programming," "architecture," or "carpentry." When the named resource is equipment, the skill identifiers may include "punch-press," "printing," or "Windows NT Operating System." Or, when the resource is another system, skills may involve the ability to execute specific functions (much like distributed or web services, "credit card validation," "shop for best air freight shipper prices"). Resource information 5404 may also include a skill strength (not shown) for each skill identifier. The skill strength may be used by the tool to differentiate one resource from another resource when matching a resource to a role of a task in a plan, col. 28, line 64 to col. 29, line 16).*

It would have been thus obvious to one of ordinary skill of the art having the teaching of Leisten and Charisius at the time the invention was made to modify the system of Leisten to include the limitations as taught by Charisius. One of ordinary skill in the art would be motivated to make this combination in order to have the skill strength may be used by the tool to differentiate one resource from another resource when matching a resource to a role of a task in a plan in view of Charisius (col. 28, line 64 to col. 29, line 16), as doing so would give the added benefit of providing an integrated process modeling and project planning tool that allows an enterprise affiliate to improving a workflow that models a process as taught by Charisius (Abstract).

As per claim 60, Leisten teaches the system of claim 58, wherein said processor is configured for obtaining said entity model by providing a user interface for allowing a user to input data regarding said entity *(i.e. the application of resources, as building teams, col. 15, lines 50-60).*

Leisten implicitly teaches "a user interface for allowing a user to input data regarding said entity" as application of resources, col. 15, lines 50-60.

Charisius expressly teaches this limitation in Fig. 45 *(i.e. Adding A Resource, FIG. 53 depicts a flow diagram illustrating an exemplary process performed by the Client Interface 134 to add a new resource to the list of available resources. The Client Interface 134 may later assign the resource to a plan in accordance with methods and systems consistent with the present invention. Initially, the Client Interface 134 receives a request to add a new*

resource (step 5302). As shown in FIG. 54, the Client Interface 134 may receive the request to add a new resource via a pull-down menu selection 5402 and 5404 that is chosen by an enterprise affiliate. The enterprise affiliate may, however, use any known data input technique, such as an icon or keyboard input, to indicate the request to the Client Interface 134, col. 28, lines 16-29).

It would have been obvious to one of ordinary skill of the art having the teaching of Leisten and Charisius at the time the invention was made to modify the system of Leisten to include the limitations as taught by Charisius. One of ordinary skill in the art would be motivated to make this combination in order to have the skill strength may be used by the tool to differentiate one resource from another resource when matching a resource to a role of a task in a plan in view of Charisius (col. 28, line 64 to col. 29, line 16), as doing so would give the added benefit of providing an integrated process modeling and project planning tool that allows an enterprise affiliate to improving a workflow that models a process as taught by Charisius (Abstract).

Response to Arguments

Applicant's arguments with respect to claims 1-22, 29-39, 46-50, 52-62 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Miranda Le whose telephone number is (571) 272-4112. The examiner can normally be reached on Monday through Friday from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James K. Trujillo, can be reached at (571) 272-3677. The fax number to this Art Unit is (571)-273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Miranda Le/
Primary Examiner, Art Unit 2169

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